

**WHAT IS CLAIMED IS:**

1. A range-conversion method comprising:
  - receiving data records, wherein each data record includes one or more data fields and a field value associated with each data field;
  - identifying one or more data fields as a range-based data field; and
  - defining a plurality of text-based range descriptors, wherein each text-based range descriptor is associated with a range of field values for one of the range-based data fields.
2. The range-conversion method of claim 1 wherein a text-string is associated with a specific data record.
3. The range-conversion method of claim 2 wherein the specific data record includes a range-based data field, the range-conversion method further comprising:
  - incorporating, into the text-string associated with the specific data record, the text-based range descriptor that is associated with the field value of the range-based data field included in the specific data record.
4. The range-conversion method of claim 1 further comprising
  - generating a text-string for each data record, wherein each text-string includes one or more text-based data descriptors, such that each data descriptor includes:
    - a field descriptor that defines a specific data field within the data record to which the text-string is related, and
    - a value descriptor that defines the field value associated with the specific data field.
5. The range-conversion method of claim 4 wherein each text-string further includes a

record identifier that identifies the data record to which the text-string is related.

6. The range-conversion method of claim 4 wherein a specific data record includes a range-based data field, the range-conversion method further comprising:

incorporating, as the value descriptor of the text-string associated with the specific data record, the text-based range descriptor that is associated with the field value of the range-based data field included in the specific data record.

7. The range-conversion method of claim 6 wherein each data descriptor includes one or more starting characters, one or more separator characters, and one or more ending characters.

8. The range-conversion method of claim 7 wherein the field descriptor is positioned between the separator characters and one of the starting characters and the ending characters.

9. The range-conversion method of claim 8 wherein the value descriptor is positioned between the separator characters and the other of the starting characters and the ending characters.

10. The range-conversion method of claim 1 wherein each range of field values is a numeric range.

11. A search method comprising:

defining a target data range for a range-based data field within a database record structure of a database, wherein the database includes a plurality of data records;

searching a plurality of text-strings, wherein each text string is associated with one of the data records and includes one or more text-based data descriptors, such that at least one data descriptor within each text-string includes:

a field descriptor that defines a specific range-based data field within the data record to which the text-string is related, and

a text-based range descriptor that is associated with a range of field values for the specific range-based data field; and

generating a first result set by identifying one or more text-strings that include a text-based range descriptor that is essentially equivalent to the target data range.

12. The search method of claim 11 further comprising retrieving the data record associated with one or more of the text-strings identified in the first result set.

13. The search method of claim 11 wherein each text-string further includes a record identifier for associating the text-string and the data record to which the text-string is related.

14. The search method of claim 11 wherein each range of field values is a numeric range.

15. The search method of claim 11 wherein each data descriptor includes one or more starting characters, one or more separator characters, and one or more ending characters.

16. The search method of claim 15 wherein the field descriptor is positioned between

the separator characters and one of the starting characters and the ending characters.

17. The search method of claim 16 wherein the text-based range descriptor is positioned between the separator characters and the other of the starting characters and the ending characters.

18. The search method of claim 11 further comprising:

defining a target value for each of one or more data fields within the database record structure of the database;

searching the plurality of data records included in the database; and

generating a second result set by identifying one or more data records that include a field value that is essentially equivalent to at least one of the target values.

19. The search method of claim 18 further comprising retrieving one or more of the data records identified in the second result set.

20. The search method of claim 11 wherein the data records are representative of the medical records of patients.

21. A computer program product residing on a computer readable medium having a plurality of instructions stored thereon which, when executed by the processor, cause that processor to:

receive data records, wherein each data record includes one or more data fields and a field value associated with each data field;

identify one or more data fields as a range-based data field; and

define a plurality of text-based range descriptors, wherein each text-based range descriptor is associated with a range of field values for one of the range-based data fields.

22. The computer program product of claim 21 wherein a text-string is associated with a specific data record.

23. The computer program product of claim 21 wherein the specific data record includes a range-based data field, the computer program product further comprising instructions for:

incorporating, into the text-string associated with the specific data record, the text-based range descriptor that is associated with the field value of the range-based data field included in the specific data record.

24. The computer program product of claim 21 further comprising instructions for:

generating a text-string for each data record, wherein each text-string includes one or more text-based data descriptors, such that each data descriptor includes:

a field descriptor that defines a specific data field within the data record to which the text-string is related, and

a value descriptor that defines the field value associated with the specific data field.

25. The computer program product of claim 24 wherein each text-string further includes a record identifier that identifies the data record to which the text-string is related.

26. The computer program product of claim 24 wherein a specific data record includes a range-based data field, the computer program product of claim further comprising instructions for:

incorporating, as the value descriptor of the text-string associated with the specific data record, the text-based range descriptor that is associated with the field value of the range-based data field included in the specific data record.

27. The computer program product of claim of claim 26 wherein each data descriptor includes one or more starting characters, one or more separator characters, and one or more ending characters.

28. The computer program product of claim of claim 27 wherein the field descriptor is positioned between the separator characters and one of the starting characters and the ending characters.

29. The computer program product of claim of claim 28 wherein the value descriptor is positioned between the separator characters and the other of the starting characters and the ending characters.

30. The computer program product of claim of claim 21 wherein each range of field values is a numeric range.

31. A computer program product residing on a computer readable medium having a plurality of instructions stored thereon which, when executed by the processor, cause that processor to:

define a target data range for a range-based data field within a database record structure of a database, wherein the database includes a plurality of data records;

search a plurality of text-strings, wherein each text string is associated with one of the data records and includes one or more text-based data descriptors, such that at least one data descriptor within each text-string includes:

a field descriptor that defines a specific range-based data field within the data record to which the text-string is related, and

a text-based range descriptor that is associated with a range of field values for the specific range-based data field; and

generate a first result set by identifying one or more text-strings that include a text-based range descriptor that is essentially equivalent to the target data range.

32. The computer program product of claim 31 further comprising instructions for retrieving the data record associated with one or more of the text-strings identified in the first result set.

33. The computer program product of claim 31 wherein each text-string further includes a record identifier for associating the text-string and the data record to which the text-string is related.

34. The computer program product of claim 31 wherein each range of field values is a numeric range.

35. The computer program product of claim 31 wherein each data descriptor includes one or more starting characters, one or more separator characters, and one or more ending

characters.

36. The computer program product of claim 35 wherein the field descriptor is positioned between the separator characters and one of the starting characters and the ending characters.

37. The computer program product of claim 36 wherein the text-based range descriptor is positioned between the separator characters and the other of the starting characters and the ending characters.

38. The computer program product of claim 31 further comprising instructions for:

- defining a target value for each of one or more data fields within the database record structure of the database;
- searching the plurality of data records included in the database; and
- generating a second result set by identifying one or more data records that include a field value that is essentially equivalent to at least one of the target values.

39. The computer program product of claim 38 further comprising retrieving one or more of the data records identified in the second result set.

40. The computer program product of claim 31 wherein the data records are representative of the medical records of patients.



41. A searching system comprising:
- a server system including a computer processor and associated memory, the server system having a database that includes a plurality of data records;
  - wherein the server system is configured to:
    - receive data records, wherein each data record includes one or more data fields and a field value associated with each data field;
    - identify one or more data fields as a range-based data field; and
    - define a plurality of text-based range descriptors, wherein each text-based range descriptor is associated with a range of field values for one of the range-based data fields.
42. The searching system of claim 41 wherein the server system is coupled to a distributed computing network.

43. A searching system comprising:

a server system including a computer processor and associated memory, the server system having a database that includes a plurality of data records;

wherein the server system is configured to:

define a target data range for a range-based data field within a database record structure of a database, wherein the database includes a plurality of data records;

search a plurality of text-strings, wherein each text string is associated with one of the data records and includes one or more text-based data descriptors, such that at least one data descriptor within each text-string includes:

a field descriptor that defines a specific range-based data field within the data record to which the text-string is related, and

a text-based range descriptor that is associated with a range of field values for the specific range-based data field; and

generate a first result set by identifying one or more text-strings that include a text-based range descriptor that is essentially equivalent to the target data range.

44. The searching system of claim 43 wherein the server system is coupled to a distributed computing network.

45. A data structure comprising:
- a database including a plurality of data records, wherein each data record includes one or more data fields, and a field value is associated with each data field;
  - and
  - a text-string for one or more data records, wherein each text-string includes one or more text-based data descriptors, such that each data descriptor includes:
    - a field descriptor that defines a specific range-based data field within the data record to which the text-string is related, and
    - a text-based range descriptor that is associated with a range of field values for the specific range-based data field.
46. The data structure of claim 45 wherein the text-strings may be stored within a text-based data file.
47. The data structure of claim 46 wherein the text-based data file is an ASCII file.
48. The data structure of claim 45 wherein each text-string further includes a record identifier that identifies the data record to which the text-string is related.
49. The data structure of claim 45 wherein each data descriptor includes one or more starting characters, one or more separator characters, and one or more ending characters.
50. The data structure of claim 49 wherein the field descriptor is positioned between the separator characters and one of the starting characters and the ending characters.
51. The data structure of claim 50 wherein the text-based range descriptor is positioned between the separator characters and the other of the starting characters and the ending characters.
52. The data structure of claim 45 wherein the data records are representative of the medical records of patients.